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IT as an Interactive Teaching Tool in Legal Education

Abstract

Practical Presuppositions and Educational Consequences

This project is a continuation of a development project at Stockholm University Law Faculty, which has generated a prototype for interactive studies in procedural law. The project combines information technology (IT) and legal theory.

This new project phase has three objectives:
a) To test, evaluate, and elaborate the prototype and databases that so far have been developed in practical teaching situations,
b) to make an international inventory and comparative analysis of ongoing projects concerning IT-based legal education, and
c) further develop the knowledge about interactive teaching tools for legal education.

The underlying assumption is that adequate teaching tools in the field of law must be based on in-depth knowledge of legal pedagogy and that this presupposes constant and conscious testing of various solutions. An important presupposition for this project phase is also that, although commercial products can be expected, the law schools must develop their own competence in this respect. The latter in order to be able to articulate adequate requirements and evaluate various alternatives.

IT as an interactive teaching tool in legal education is a co-operation between two legal disciplines, Computers and Law and Procedural Law. The project thus combines methodological theories developed within the field of Computers and Law with substantive law related to the evaluation of evidence, a crucial component in Procedural Law. The results from the project are however assumed to be of a general nature, i.e. the experiences that are gained should be possible to utilise also in other fields of the law. In this respect Procedural Law is one example of several potential application areas.

Case Karlsson (a classified teaching aid in the courses of criminal procedure)

http://bevis.cenneth.com/index2.html

INFORMATION TECHNOLOGY AS AN INTERACTIVE TEACHING TOOL IN LAW

Case Karlsson - A Project Documentation

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Summary

Multimedia as a teaching aid in law is a research project studying teaching aids based on information technology (IT). The work on the project started in 1997 and is still in progress.

The project intends, partly, to take stock of the international developments in interactive educational legal systems, and partly, to generate a prototype system that can be tested in real educational contexts.

The project combines theories and methods developed by law and information technology with procedural law material. The work is expected to produce general results in which the experience obtained in the course of the project will form a basis for continued development of legal teaching aids also in other areas. Procedural law is in this respect just one example of many possible future application areas.

Background

Information technology offers countless possibilities of information processing, and has made enormous amounts of information accessible to the public. Development of IT applies also to law. Various kinds of products emerge, and many IT products have been developed especially for lawyers. Among the existing applications there is a large range of conventional text collections based on statutes, preparatory materials, court cases, references to the literature, EU law, etc. Other products provide support for contract conclusion, tax calculations, make estate inventories, and similar. At international level continued product development may be noticed, in which various forms of information are increasingly combined together, such as texts and pictures, graphics, and symbols which were not very common in law before.

Another noticeable trend is a growing number of functions. Examples include systems supporting electronic conferences, interactive support for the initiation of different legal matters by the processing of forms, solutions for electronic commerce, interactive counselling, special factual databases arranged by topic, services for the distribution of software for lawyers, etc.[1]

[1] Relevant examples from June 2000 are: www.nolo.com, www.lawcentral.com, and www.dol.gov/elaws.

Also in the field of education a variety of products have emerged in recent years. A yearly recurring forum for the latter are the conferences arranged by the British and Irish Legal Educational Technology Association (BILETA).[2] An experienced organisation dealing with the exchange of know-how and the development of products concerning legal education can also be found in the USA: it is the Council for Computer Assisted Legal Instruction (CALI),[3] with more than 175 Law Schools as its members.

The knowledge of how IT and multimedia should best be used in this context is, however, inadequate, and in many cases non-existent. Full understanding of how the technology shall best be used is not a straightforward task either: the development has been uneven, and it is sometimes difficult to distinguish a good product from a bad one. In addition, the accompanying technical prerequisites are constantly changing. It is therefore absolutely necessary for legal students and scholars to monitor these changes all the time.

Considering the above, this project aims to provide answers to the following questions:

- What requirements shall be laid down on IT products and services concerning legal education?

- Which aspects of legal education should be supported, and what kind of study situations are most suitable for the different applications?

- How can and should IT-based teaching aids be combined with the traditional forms of study?

- Which aspects of the development of useful teaching aids should be considered, and what objectives can be regarded as reasonable?

- What resources are necessary, and what forms of knowledge must be combined together in order to make the development projects meaningful?

- How will teaching aids of this kind be received by law students, and how should the applications be evaluated?

- What are the effects of educational programmes supported by IT? Is the acquisition of knowledge enhanced in any way, and how effective is this form of tuition?

Information technology law and law studies

The research project studying teaching aids based on IT is part of the Law Department's at Stockholm University long-term investment in information technology law and IT-supported tuition. This specific profile has been manifested, for example, by an early establishment of computer halls for demonstration and use of

[2] http://www.bileta.ac.uk/
[3] http://www.cali.org/

IT applications, as well as by means of introduction of obligatory courses in information technology law and the legal method. In 1999 a Master's Programme in Law and IT was introduced with English as the language of tuition in order to provide a one-year postgraduate course of study for lawyers.[4]

Insufficient investment of the Department in IT support has resulted in teaching being conducted almost exclusively with the help of products and services coming from other quarters. An obvious weakness of such a situation is that only a small portion of the available products have been developed for educational purposes. Except for the more simple database products of commercial origin the only available products developed especially for teaching purposes are foreign applications. It is also obvious that apart from their function as illustrations, many products of foreign origin cannot be fitted without difficulty into the Swedish law programme. The differences between the different legal systems and law programmes constitute palpable problems here.

Another significant reason for considering this project as very important is the general progress in information technology. IT and the accompanying changes in the way information processing is viewed entail that even the role of the legal profession has to be re-examined. The latter means, *inter alia*, that one can predict that the traditional knowledge of the material aspects of law will have to be rapidly supplemented with knowledge of user situations, as well as a more profound understanding of the functions of law in different respects - the reason being that those working with law in its different forms shall be able to understand the kind of products and services which are suitable for development and use.

Being able to benefit from the knowledge acquired in the course of the legal studies regarding these phenomena is extremely important not only in order to be able to devise one's own systems, but also to evaluate the products to be presented and formulate the requirements concerning them. It must be noted in this context that commercial parties, publishing houses, database producers and larger organisations are developing their skills and competence in this area at a fast pace, which means, in turn, that the range of IT-related products and services will increase dramatically in the near future. A quick overview of the products on the market also shows that their quality varies a lot.

If the possibilities offered by IT are to be fully utilised, the law study programmes must attain a much higher standard. It is important in this context for the persons responsible for the law study programme to acquire competence in this area so that the qualitative aspects of the final product are not neglected and receive a prominent place.

Considering the rapid development of information technology it is quite obvious that improving one's competence in this field is an urgent task. The lawyers-to-be must be well prepared that their work will take on many new forms, different from those in the past. It is also important to emphasise that technical development makes it necessary to more or less continuously study these issues. In addition, information technology is a field in which practical work is necessary – both theories and products have to be therefore tested in realistic situations.

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[4] See Magnusson Sjöberg, Cecilia & Wahlgren, Peter: *The Master's Programme in Law and Information Technology at Stockholm University*. In Wahlgren, P. IT och juristutbildning, Jure, Stockholm 2000 (Nordisk årsbok i rättsinformatik 2000).

Consequently, the objective of this project is to form a lasting basis for practical development work from the perspective of law and information technology theories on IT-based management of law. Procedural law is therefore a suitable application area in which to test prototype models, where the possibilities of testing theories relating to legal information structures and different categories of needs appear to be very good.

At a more specific level it is also important to be able to find methods of cooperation between persons possessing different skills. In a project of this kind persons possessing very different skills have to collaborate. It is not only necessary to be able to adapt data communication technology and software applications to the legal studies – the need of other collaboration forms can also be predicted. Collaboration is thus desirable, for example, between persons with specialised knowledge of legal structures (text and document representations must be supplemented with other forms of information), persons with knowledge of technical standards for text labelling (texts must be able to fulfil several functions), persons with experience in operational analysis and systems engineering (digital aids must be adapted to legal work), and persons with experience in graphic design for multimedia (the presentations must be comprehensible and user-friendly), etc. The project aims to identify those aspects which need to be developed most urgently, improving in this way the understanding of how continuing work shall be conducted.

It is also important to call attention to the fact that IT and legal education constitute a very wide field which accommodates many different phenomena. It is also clear that theories and empirical studies are still rather rudimentary. Being able to work with a specific application would thus be a very valuable component of the long-term work on the creation and development of a reliable IT and educational basis of knowledge.

A closer look at procedural law's concerns

As far as procedural law is concerned the aim of the project is to create a prototype model of a teaching aid that can be used as a supplement to textbooks, seminars, lectures, simulated court proceedings and extension courses. It is intended that by providing auxiliary material for practical problems' solution the teaching aid can be used on an individual basis in order to improve the understanding and knowledge of the ways in which procedural law's material can and should be applied in specific, concrete court cases.

This teaching aid may be compared in the first place to role playing in simulated court proceedings which often take place at universities as part of law courses in procedural law and other kinds of extension courses for judges, policemen, lawyers, etc. The difference between the two is that here the proceedings and the other players can be found in a computer programme, and the practical exercises can be selected individually regarding the part to be played, the degree of difficulty, the point in time and the scope of the task. In order to strengthen the relevant parties' motivation for the use of this teaching aid, and especially to overcome their resistance to and the poor knowledge of information technology applications, we have also discussed the extent and the ways in which this teaching aid can be combined with other teaching methods within the framework of this project.

As regards the *target group* the objective has been to keep all the possibilities open, so that anyone who shows interest in improving their knowledge of the principles underlying procedural law and the ways in which they should be applied shall be able to use this teaching aid. In concrete terms this means that the user shall be able to make the most of the knowledge which is valid for his or her needs, which means in turn, that one must be able to use the program at different levels of sophistication.

A preliminary classification into different levels of proficiency may look something like this:

1. laymen
2. jurors, policemen
3. law students of procedural law, basic course
4. law students of procedural law, specialised course
5. law clerks, assistant lawyers, assistant public prosecutors, etc.
6. lawyers, public prosecutors, judges.

The above list indicates that the project addresses in the first place criminal proceedings, but does not rule out future applications in the field of civil law. In any case, one should be able to apply the knowledge acquired during the development of the project also to this type of proceedings (as well as to arbitration proceedings and legal proceedings in general). As illustrated below, the first version of the project has been adapted to level 6 listed above.

Implementation and working sequence

The project was preceded by a preliminary study in which ongoing international projects were described and documented experiences listed. More or less at the same time a draft of a systems specification was formulated. The draft was based on a realistically described bank robbery case (Case Karlsson). The case was supplemented by a number of specifications and data which the system's user had to find and evaluate by means of different procedures.

The system's application was defined in such a way that the dialogue between the system and the user became an interactive one in that the user's earlier choices influenced the way in which the system presented the information and evaluated the measures undertaken by the user. The development team used authentic investigative material (although no longer identifiable). The user of the system works therefore solely with documents and other types of material which are almost identical with the material used by prosecutors, lawyers and judges in their daily work. In this way the system could be applied in realistic situations, with the project team collaborating with both the police authorities and the public prosecutor's office.

In accordance with what has been mentioned before, the system has been designed in such a way that the user may choose between different roles. The first role to be developed was that of a prosecutor. The user's objective was here to collect by means of different procedures and considerations such facts and supporting evidence that would be sufficient for a conviction.

The work with this practical prototype model followed the usual working process with system development models using interactive development of successively

improved and reformulated versions. In addition to pure programming efforts the central components of this work included identification of relevant knowledge, acquisition of knowledge and knowledge representation. This is why at this stage of the project special technical competence became part of the working process. Initially, possibilities of developing the application in the form of a CD-ROM product were considered, but this way of tackling the problem was abandoned relatively early, and the prototype version of Case Karlsson constitutes a wholly internet-based application.

Another important prerequisite for the design of these simulated criminal proceedings (Case Karlsson) has been that the user shall choose his *role* as a juror, judge, prosecutor or defence lawyer right from the start, and that the trial's progress and its outcome are decided by the user's ability to make correct choices and draw correct conclusions as the trial progresses.

The defence lawyer's or the prosecutor's aim will therefore be to 'win' the litigation, the prospects of which will be decided by the user's ability to apply his skills in procedural and evidence law to the problems arising during the trial.

The judge's aim will be to conduct the proceedings correctly, partly by avoiding procedural errors, and partly by correct evaluation of the evidence (and to determine a suitable penalty).

The differences between various level of difficulty, for example, students and jurors as compared to experienced judges) are determined both by the number of relevant circumstances that have to be considered, and by the number of possible or acceptable alternatives (and the manner in which they are formulated), as well as by the 'help' provided by the programme at the chosen level of difficulty. The user should also be able to decide whether he wishes to be informed about incorrect choices during the trial or after the trial.

As regards the *content,* the simulated proceedings follow the criminal trial from beginning to end, which means that it can be divided into the following stages:

1	criminal offence
2	preliminary hearing
3	decision on coercive measures (arrest, detention, etc.)
4	examination of the right to prosecute
5	details of the crime
6	trial proceedings (including the statement of constituent facts, the hearing of the evidence, the pleadings, etc.)
7	deliberation: a) the question of guilt (evidence evaluation) b) the question of sanction
8	judgment
9	appeal
10	the question of leave of appeal

The division of the process into different stages means that the selection of the role determines the components in which the user will take an interactive part. In other words the user's decisions are automatically reflected in the remaining stages, depending on the level of difficulty and the selected alternative. More specifically, this means that a person who has chosen to play the role of a judge will play an

integrative part in stages 3, 6, 7, 8 and 10 above, whereas a prosecutor and a defence counsel will participate in stages 1-6 and 9-10.

If the user wishes to concentrate on some special part of the process, for example the examination and assessment of evidence, he may play an integrative part in one or just a few of the above-mentioned stages only. We have endeavoured to provide so many different levels of difficulty and game variants that many hours of specialised usage can be filled with such tasks. For example, within the framework of examination and assessment of evidence the level of difficulty is determined *inter alia* by means of access to the facts relevant to the case (the principal items of evidence, evidence in rebuttal), which the user should be able to decide on not only by means of his general level selection (for example juror/law clerk/judge) but also within the selected level.

In addition to concrete solutions of the problems faced by the user in his selected role at every separate level the user shall also have *access to information* as to why the relevant choice is correct/wrong. It is up to the user to decide whether and to what extent he wishes to use this information. Even this information is linked to the selected level of difficulty, which means that it can be presented in a simpler way to jurors than to lawyers, for example. This information is supplied partly in the form of statutory texts, principles, definitions, formulas, etc., and partly in the form of references to suitable sources (for example, preparatory materials, adjudications of the Supreme Court, and views prevailing in the literature). In many cases this material has been supplemented with other explanatory texts and other kinds of information produced within the framework of the project.

The content's description of the presently surveyed teaching aid demonstrates that it has been designed to be used in various different ways in order to facilitate more or less advanced studies. A person who so wishes may restrict himself to a certain level of difficulty in order to find the right way of arriving at a correct decision or winning a case, thus adapting his acquisition of knowledge to a trial and error method.

On the other hand the simulated proceedings may be used as a methodical, step-by-step way of learning not only about the manner in which a criminal process progresses, but also about the principles underlying this process. What is absolutely essential then is not so much making correct choices, but learning in which situations these choices arise and what factors have then to be considered. Between these two extremes a number of combinations may be found.

As transpires from this description, the game is characterised by a large quantity of information and a large number of different variables. This means that the user will be able to implement the same process several times playing the same role without being able to foresee the outcome. Keeping this kind of game exciting and stimulating is a very important pedagogical requirement. The multitude of variations is achieved in this case by the fact that the outcome of a game session depends not only on one's own skill but also on the quantity of information provided for a given game (the number of facts in issue, unambiguity, clarity, counter-evidence, etc.) The quantity of information is determined in turn partly by the selected level of difficulty and partly by a pre-programmed 'randomness' (for example, the person accused of the crime – guilty or not guilty), as well as by the fact that one may play against a 'perfect' or an 'imperfect' judge.

From the purely technical point of view the game has been constructed in such a way that the users, playing their different parts, are faced with sequentially presented

problems which have to be solved by making different choices or applying different measures. The user's reactions determine the direction of the game, because the system registers the user's replies and the measures undertaken by him, and awards points for his replies and decisions. The number of points scored by the user is not revealed to him, but determines nevertheless the way in which the system works at each relevant stage of the game. The number of covert variables and combinatory possibilities is very large, which is why it should be practically impossible to make out how the system of point assignation controls the game in practice, without first analysing and figuring out the answers to the procedural questions which have been presented.

The above-presented description may suggest that the *emphasis of this training program* has been placed on the evaluation of evidence. This is the aim of the higher levels only, i.e. when the users play the roles of prosecutors, lawyers and judges. Even at intermediate level (law students, for example) various elements of evidence law will appear, but at a much more elementary level. At this level of difficulty the emphasis will be placed instead on the progress of the proceedings, i.e. on teaching the user how the judge and the parties shall act at different stages of the process. In the role of a judge, for example, the user will have to master the different procedural stages, he will have to learn how to conduct and lead the proceedings propelling them forward step by step, and find solutions to various procedural problems (such as impediment to trial proceedings, admissible evidence, procedural errors, etc.). When acting as a prosecutor it is important to select the correct classification of the crime, formulate a description of the details of the crime, select items of evidence, etc. When playing the role of a defence attorney it is important to establish a line of defence, search for procedural objections to the prosecutor's plan of action, collect arguments regarding the question of sanction, etc.)

At the lowest level (jurors, policemen) the game will have to do less with direct interaction from the point of view of procedural rules and principles and more with developing a view on (and learning of) what is permissible/impermissible in Swedish criminal proceedings.

A closer look at the design

The game module

Regarding the *visual design* we wish to make the most of information technology's sound and visual possibilities, using it for illustrative and reinforcement purposes. During trial proceedings, when making a decision to prosecute, or during deliberations, the possibilities of visual illustration are restricted insofar as depiction of the environment is concerned, i.e. the courtroom and the parties. A study of foreign solutions also shows that such representations may easily appear as mechanical and monotonous. The use of photographs and similar objects at this stage of the process is therefore relatively restricted. At other stages there are many possibilities of using pictures, for example, by showing the scene of the crime, the finds made at the scene of the crime, 'line-ups' at which the offender is to be identified, technical evidence, etc.

Even during hearings and evaluation of evidence pictures are used relatively frequently e.g. pictures of fingerprints, DNA profiles, samples of handwriting in order to help the user (the prosecutor in the course of the examination of the right to prosecute and the judge during the deliberations) to establish whether a given find can be linked to the suspect.

When working out the general design it is important that knowledge, and not pure chance, shall be decisive for the outcome. It should therefore be possible to do the exercise in such a way as to be able to always ensure with the help of auxiliary functions (i.e. with the program pointing out erroneous selections in the course of the exercise) a correct result (or at least when playing the role of a judge). At the same time it should also be possible to play the game without any corrections, except after the game. This will make that occurrences of certain irrelevant facts may lead, for example, the prosecutor to the institution of criminal proceedings against a wrong person, or they may result in the lawyer's securing an acquittal of a guilty person.

Data bases

In a study programme of the kind described above knowledge and information bases[5] constitute the central components. In order to be able to take a stand regarding the many choices at his disposal the user must have access to extensive background material. In Case Karlson a lot of work has therefore gone into the collection and adaptation of the material to be used.

The main prerequisites for the construction of this data base have been the traditional legal materials, such as statutory texts, cases, preparatory materials and the legal literature of relevance to evidence law. Many texts have been collected and stored in their entirety. In addition, the system has been supplemented by a number of especially designed web pages containing references to other material, collections of hypertext links, etc. Furthermore, a number of pages of a complementary and summarising character, written especially for the purpose, have been included. These do not only complement the legal sources material, but act also as an index to the texts stored in the data base. Moreover, many of the pages contain direct links to various material stored at other places. The latter is the main way in which to link international material with its application. The index pages consist in some cases of simple lists, and in other of graphical presentations.

The graphical presentations make often use of compilations of aspects and principles that can be assumed to promote a deeper understanding of problems regarding evidence law. An essential element of this work is the division of the legal process into a number of sequential components (preliminary investigation, use of coercive measures, prosecution, hearing of evidence, evaluation of evidence and verdict). This division into procedural components is used in various contexts, for example, the procedural principles relevant to the questions of evidence are presented in relation to this classification. In this way it is possible to provide a comprehensive illustration of those situations in which questions of evidence arise, as well as show

[5] A data base is a conventional name for a collection of data which has been stored in order to be used with the help of an IT system. A data base may contain, for example, texts, facts, statistics, etc. The term 'knowledge base' is used in order to emphasise that there is also some form of representation concerning the way in which stored data can be used in different situations.

how the procedural principles relevant to the case operate at different stages of the process.

The principles that can be seen in the above graphic presentation are linked up, in turn, with the so called pop-up windows which present textual descriptions of the respective principles. In some cases it is possible to obtain further links between these texts and other documents in the data base. This is the case when a description contains a reference to, for example, views prevailing in the literature or specific statutory provisions.

For the presentation of a number of other aspects in the form of supplementary overviews of the procedural and evidence law principles another form of graphic representation has been selected, namely matrixes. Aspects presented in this manner contain 'aims', 'grounds' and 'forms' related to the law of evidence.

The term *Aims* refers in this context to the legal aims that can be related to the different stages of the criminal process, such as, for example, that the use of coercive measures shall fulfil the purpose of 'protecting the criminal investigation, without having to undertake more severe measures than those necessary for the provision of this protection'. The term *Grounds* entails references to the rules and relevant exceptions governing the procedure, for example, as regards evaluation of evidence 'that admissions in criminal cases must be tried in accordance with Chapter 35, section 3, subsection 2 of the Code of Judicial Procedure'. The term *Forms* describes the ways in which the different phases of the criminal process shall be executed, for example the information that must be provided by the prosecutor in a writ of summons when formulating the case for the prosecution.

This overview has been supplemented by a compilation of evidential requirements that must be fulfilled at each stage of the process in order to be able to proceed to the next stage. Evidential requirements refer to the requirements laid down by the law, for example 'that *reasonable* doubt shall be rational, i.e. that it can be explained on pragmatic grounds, and that the explanation can be understood by outsiders, as well as that the aforementioned doubt shall be concrete, i.e. that it shall be based on concrete facts obtained from the evidence presented at the trial'. Also here references to relevant sections of statutory materials, the literature and court cases have been provided, and in many cases additional links have also been included.

A matrix based on the different stages of the trial proceedings is used even for the indexing of the legal sources which have been included in the data base. By means of the foregoing it is possible to provide specifications of the laws, preparatory materials, court cases and literature of importance for each respective stage. By means of these specifications it is, naturally, also possible to access the relevant texts with the help of links. In the latter matrix even links to the afore-mentioned legal principles have been included.

By means of activating the links in the matrix above the user can proceed, for example, to a list of relevant court.

Possible development

The IT-based methods of indexing and developing a knowledge base of the kind described above can be supplemented in many respects. It is obvious, for example,

that with the help matrixes, links, explanatory texts and other materials it is possible to highlight other aspects of the stored information and knowledge.

In a more ambitious application in the field of evidence law, many other forms of so called meta-knowledge can be included, such as, for example, check lists or in-depth descriptions of various aspects of procedural law.

Also the content of a knowledge base of this kind may be expanded so that much more material from other branches of science can be included in order to give a more diversified and wide-ranging explanation of the questions. Of interest to evidence law would be, for example, achievements in the fields of criminology, statistics, logic, witness psychology, etc., where links can be made at relatively specific levels. An example of the latter, which can be relevant in connection with the taking of evidence in the form of witness interrogation, may be links to other theories originating in cognitive sciences, memory research, etc.

A knowledge base of this kind may become useful, in turn, due to historical material being added. As regards the central components of law all the aspects which have been included in the base can additionally be reflected in comparative international material.

It is further quite clear that those aspects which are reflected in the current evidence law data base may be supplemented with further material of great practical interest. It can pertain to anything from quite new aspects to more prosaic things, such as addresses of authorities and courts, lists of persons who are willing to function as expert witnesses or specialists, or on-line access to forms and questionnaires.

At a more specific level it is possible to further refine the structures, in order to, for example, present the vantage points of other user categories and select even more specific situations and needs that may be relevant to policemen, prosecutors, lawyers, defendants, judges, jurors, law teachers and law students. This includes further division of the process in order to be able to describe, for example, the situations which may be expected to arise at different stages of the criminal process and the rules and knowledge that would have to be referred to at these stages. These needs, as well as various kinds of legal functions related to these situations, may be represented in other matrixes or in interactive questions/answers structures. Then there are the possibilities of developing more carefully prepared and more detailed components, such as rules and rule systems, concepts and conceptual hierarchies. These may form a basis for interactive dialogues with users in order to identify more specific components.

A similar manner in which the content of a knowledge base of this kind may be processed is to try to analyse and understand the way in which the material should be structured and supplemented in order to be used by users with different backgrounds and different preliminary qualifications. It may mean, for example, that the material will have to be adapted in order to be used and understood by primary or secondary school pupils, law students, laymen, journalists or experts. Here it may be necessary to adapt the language and terminology, as well as refine the specific levels of description. The latter may not be urgent in the context of evidence law, but it is certainly interesting as regards other aspects of law.

In many cases further development of structures of this kind entails a considerable working effort, much of which has a pronounced research character. This is, for example, the case when conceptual hierarchies in case-intensive areas must be described. In other respects the existing material provides obvious points of departure

for further qualifications. An example of the latter are prerequisites and other aspects that can be linked to the use of different forms of coercive measures.

Refinement of functional perspectives of a more elusive character constitutes further development possibilities. This can refer to, for example, being able to describe the function of the process from the point of view of society or in the context of organisational structures. In other cases economic criteria, the individual's integrity and legal security at individual level may be included.

At a later stage one may also discuss the possibility of carrying the game further on to the proceedings in the court of appeal. It is also quite possible that a future, more advanced variant of the system will allow several users to play different parts simultaneously.

Current situation and work in progress

The first stage of the project, i.e. the development of sequences which make simulated court proceedings possible from the vantage point of a prosecutor, was completed in the spring of 2000. At this stage the employees of the Faculty of Law and the participants of a specialised course in criminal law procedure were given an opportunity to test the programme. The game received a positive reception, especially among the students. The project group also started to collect commentaries that would form a basis for the reformulation and fine-tuning of the prosecutor's role.

In the autumn of 2000 the programming work for the role of a defence counsel was completed and material was prepared for the role of a judge. The first part of the system - the role of a prosecutor and the data base - was simultaneously tested and evaluated in a sophisticated real educational context as the system was used as a teaching aid for the introductory course in procedural law. In the summer of 2001 the role of the judge, the most complicated part in terms of programming, was finished and in the autumn of 2001 the complete Case Karlsson was introduced as a classified teaching aid in the courses of criminal procedure.

The development of system's design has been documented on a regular basis and a brief description is included in this final report. One can also predict the need for future follow-up studies and reporting of experiences from practical tests in different educational contexts. An inquiry will be distributed amongst the students in December 2001-January 2002 and the results (the student evaluation of the multi media-technique and the pedagogic method used in Case Karlsson) will be ready in February 2002.

In conclusion it should also be noted that a prototype system of this kind may be developed as a more or less advanced and sophisticated model in which the level of aspirations has to be adjusted to the resources that can be provided for the project. In this context the project should be seen as a long-term, ongoing effort in which increasingly advanced applications are defined and developed as the time progresses.